JICA

Introduction

Egypt has a footprint of 35 M electricity meters that is growing steadily and is expected to reach ~40M meters in the next 10 years. The Egyptian Electricity Holding Company (EEHC) is embarking on an ambitious program to replace its legacy electro-mechanical meters with smart meters and deploy Advanced Metering Infrastructure (AMI) that will enable it to overcome challenges with the existing metering processes and reap the rewards of a smart electricity distribution grid.

In this ambitious program, EEHC has issued 3 tenders to cover the AMI system(s), Centralized Operation and Business Systems and the required connectivity between the different systems and devices in 3 different RFPs.

The Meter to Cash process is handled by RFP 1 for the AMI system and RFP2 for the centralized Operation and Business systems, and RFP3 for connectivity.

As part of RFP2 project, EEHC has implemented Oracle Utilities stack to meet the Customer Information System, Rating & Billing and Meter Data Management functionalities which has Oracle CC&B and MDM as the corner stone of the solution.

Besides the CC&B and the MDM, EEHC also implemented Oracle MWFM, WAM, OUA and CSS which are fully integrated with the Oracle CC&B and MDM to meet the holistic business and operation objectives.

To support the above central application objectives, EEHC as part of the scope has implemented Main Production Site, DR site and 6 Data Centers for the 6 DISCOs.

To accomplish all the entire solution infrastructure, EEHC implemented the following infrastructure components:

1. Schneider Data Center (which is up to the basics TIER-II standards with (N+1) topology in UPSs and Computer Room Air Conditioner (CRACs), including the following:
    a. Uninterrupted Power Supply UPS,
    b. Computer Room Air Conditioner CRAC,
    c. Environmental logging and monitoring (ELM)
    d. Data Center Infrastructure Management (DCIM)

2. Oracle Hardware Technology including:
    a. Supercluster M8 (DB & Application).

b. Exadata X7 (Standby).
c. ZS5 storage (Main site).
d. ZS7 storage (DR site).
e. ZDLRA (for DB backup).

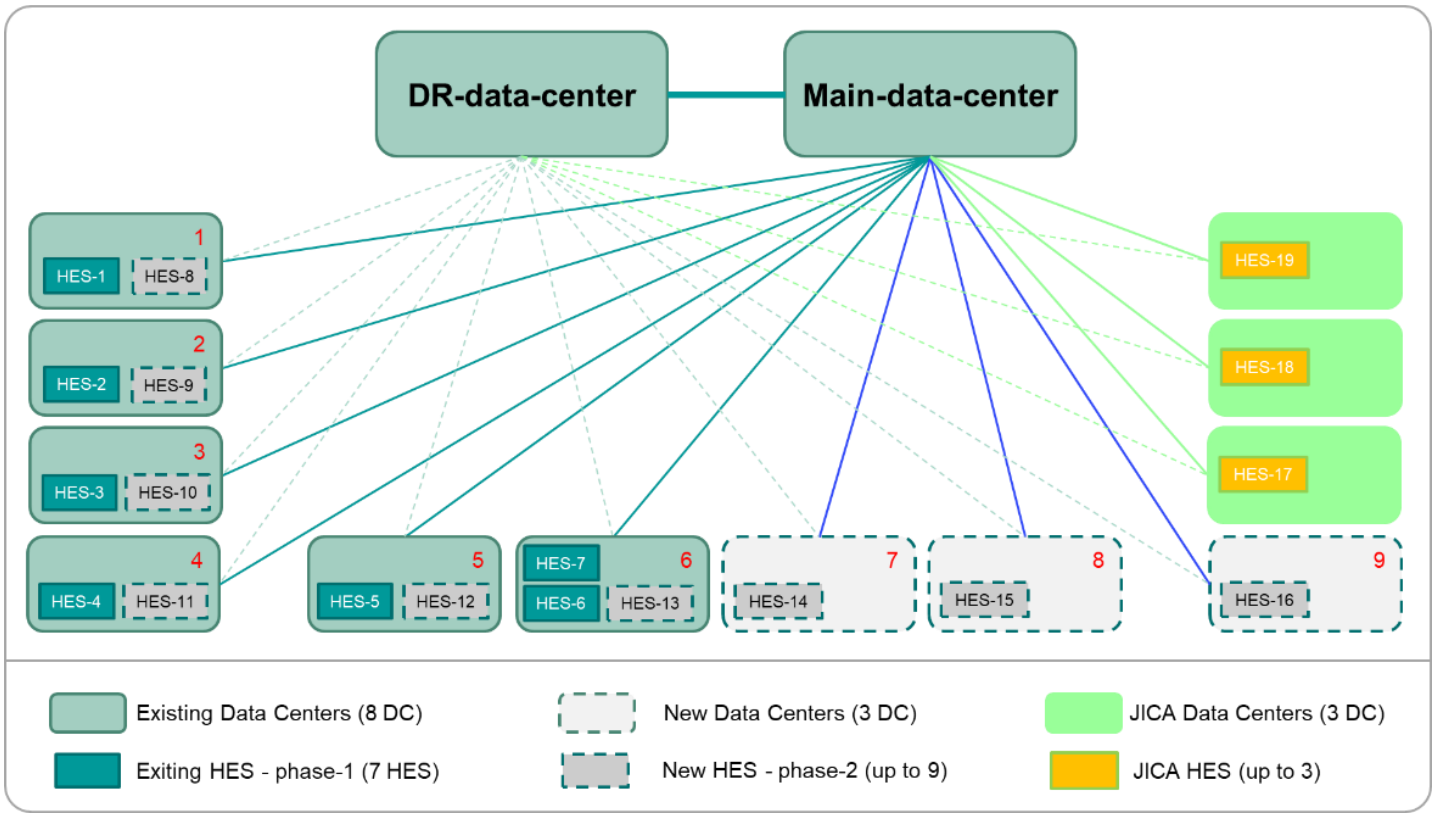
3. Networking Technologies for the networking, switching and firewall. To provide availability and connectivity to the solution, EEHC implemented the latest technologies of Software Defined Networking and Security, by implementing the following:
    a. Cisco Application Centric infrastructure.
    b. Cisco Nexus switches to provide the whole solutions with connectivity.
    c. Cisco routers to provide the data centers reachability.
    d. Cisco latest technology of Firewall.
    e. Additional Fortinet Stage Firewall
    f. F5 Load balancer.

RFP Objective

Utilizing the existing solution eco-system, and as part of the smart meters' expansion plan, EEHC would like to expand in the existing solution, to add 1.6Million smart meters to the system. The expansion should cover the following:

- 530K meters for Distributers, kiosks, Transformers, and Big customers, those meters are distributed all over the 9 DISCOS.
- 1m meters for (JICA Lot#1 ,2&3 as follow, 490K meters in NCEDC, 300k in AEDC and 175k in NDEDC, those meters are covering the residential, commercial and industrial customers.

The objective of this RFP is to invite qualified bidders to expand the current solution including (Hardware, Software and Infrastructure) to meet the above smart meter expansion programs. The offer should include expansion on the existing Software, Hardware, Network, Data Center preparation & Implementation,


DR-data-center
Main-data-center
1
HES-1
HES-8
2
HES-2
HES-9
3
HES-3
HES-10
4
HES-4
HES-11
5
HES-5
HES-12
6
HES-7
HES-6
HES-13
7
HES-14
8
HES-15
9
HES-16
HES-19
HES-18
HES-17
Existing Data Centers (8 DC)
Exiting HES - phase-1 (7 HES)
New Data Centers (3 DC)
New HES - phase-2 (up to 9)
JICA Data Centers (3 DC)
JICA HES (up to 3)